

REMARKS

This Amendment is in response to the Office Action mailed May 4, 2011. In the Office Action, claims 1-5, 8-11, 13-15, 17 and 21-26 are rejected under 35 U.S.C. §112, second paragraph. Furthermore, claims 1-5, 8-11, 13-15, 17 and 21-26 are rejected under 35 U.S.C. §103(a). Herein, Applicant has amended claims 1, 3, 14 and 23

Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 112

In the Office Action, the Examiner rejected claims 1-5, 8-11, 13-15, 17, and 21-26 under 35 U.S.C. §112, second paragraph. Applicant respectfully disagree and respectfully submit that the first full paragraph on page 8 of the subject application describes that “[t]he collective *depth of the compartments 202 and 212* is sufficient to *house*, at a minimum, anode the cathode components, at least one membrane 220 and optional screen spacers 230 and 240.” *Emphasis added*. In Figure 2 of the subject application, each compartment 202 and 212 is depicted as the area *within* a corresponding cell frame 200 and 210. As the specification describes that the compartments themselves house the anode, cathode and membrane, not the area outside the compartments, Applicant respectfully submit compliance with 35 U.S.C. §112, second paragraph.

Therefore, Applicant respectfully requests the rejection under 35 U.S.C. §112 be withdrawn.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1, 2, 11, 23, and 24 under 35 U.S.C. §103(a) as being unpatentable over Tighe (U.S. Patent No. 4,129,493). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, certain basic criteria must be met. For instance, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. *See MPEP §2143*. Applicant respectfully submits that the combined

teachings do not address each and every limitation, and thus no *prima facie* case of obviousness has been established.

Furthermore, the Supreme Court in Graham v. John Deere, 383 U.S. 1, 148 USPQ 459 (1966), stated: “Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.” *See MPEP §2141*. In KSR International Co. vs. Teleflex, Inc., 127 S.Ct. 1727 (2007) (Kennedy, J.), the Court explained that “[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order *to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.*” *Emphasis Added*. The Court further required that an explicit analysis for this reason must be made. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” KSR, 127 S.Ct. at 1741, quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006).

In the instant case, Applicant respectfully submits that the combined teachings of the cited prior art references do not teach or suggest all the claim limitations. Furthermore, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and thus, there is no apparent reason to combine the known elements in the manner as claimed. No *prima facie* case of obviousness has been established.

Tighe does not disclose or render obvious, at least, “a collective depth of the first and second compartments houses at least the membrane,” as recited in independent claims 1, 14, and 23. Rather, Tighe merely discloses a pair of neoprene gaskets 60 & 62 being disposed between peripheral flanges 38, 40 of the catholyte and anolyte chambers. Disposed between neoprene gaskets 60, 62 generally parallel to cathode 40 and anode 50 is a substantially hydraulically impermeable cation exchange membrane 64 (Tighe, col. 4, lines 47-57; Figure 2). *Emphasis Added*. Conventional mechanical fasteners 68 are employed to assemble catholyte and anolyte

chambers 30 & 32 together at flanged areas 38 & 48 with neoprene gaskets 60 & 62 and membrane 64 interposed therebetween (Tighe, col. 5, lines 10-15; Figure 2). *Emphasis Added.*

As illustrated in the Figure 2, the membrane 64 is not placed inside the chambers 30 & 32 between the gaskets 60 & 62 and the side walls 36 & 46. Instead, the membrane 64 is held between the flanged areas 38 & 48 by the fasteners 68. Thus, the membrane 64 is not housed within the collective depths of the compartments of the chambers 30 & 32. Accordingly, Tighe fails to disclose “a collective depth of the first and second compartments houses at least the membrane,” as delineated in independent claims 1, 14, and 23.

In order to clarify the cell architecture, Applicant have included the limitation that “the membrane, the anode electrode and the cathode electrode are (i) sealed within the collective depth of the first compartment and the second compartment to prohibit off-gassing” in order to more clearly identify that this limitation.

Furthermore, claims 3, 4, 25, and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tighe in view of Pohto (U.S. Patent No. 4,056,458); claims 5 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tighe in view of Pohto and “Newest News About Brown’s Gas” (“NNABG”); claims 8 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tighe in view of Weltin (U.S. Patent No. 3,875,040); claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Tighe in view of Weltin and NNABG; claims 14, 15, and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tighe in view of NNABG; and claims 21 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tighe in view of NNABG and Pohto. Applicant further submits that a *prima facie* case of obviousness has not been established for dependent claims 2-5, 8-11, 13, 15, 17, 21-22, and 24-26. However, based on the dependency of claims 2-5, 8-11, 13, 15, 17, 21-22, and 24-26 on independent claims 1, 14, and 23, respectively, which are believed by Applicant to be in condition for allowance, Applicant respectfully submits that claims 2-5, 8-11, 13, 15, 17, 21-22, and 24-26 are believed to be allowable for at least the reasons set forth above.

Therefore, Applicant believes that independent claims 1, 14, and 23 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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